



# Twin Screw Feeder

## DDSR60 2.0 (AC)

Volumetric and Gravimetric



### General Information

The [DDSR60](#) feeder is ideal for difficult flowing, sticky, bulk ingredients that tend to compact or form bridges while it is at rest in the storage hopper.

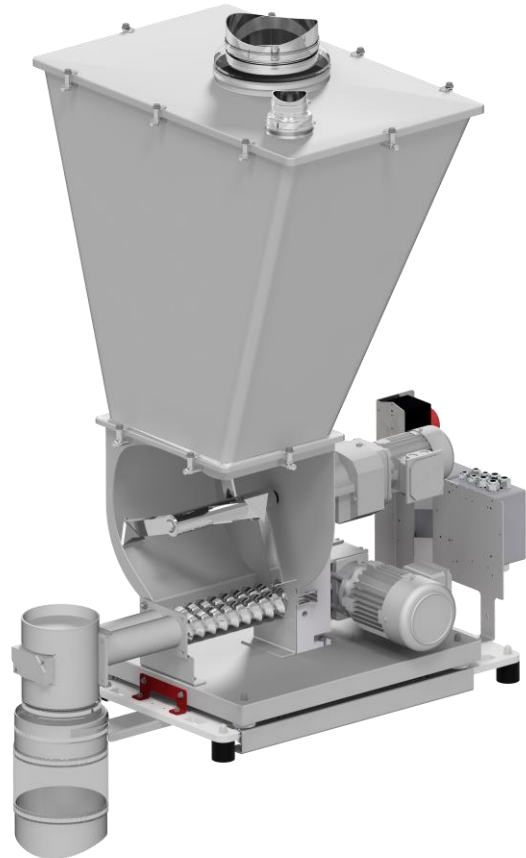
The feeder has the following main components: A stainless steel screw trough with an inspection opening, a modular gear block, an agitator in the screw trough, a three-phase motor as agitator drive, twin screw, a three-phase motor as screw drive, a screw tube and an extension hopper with volumes of 200 dm<sup>3</sup> (7 cuft) or 300 dm<sup>3</sup> (10.5 cuft).

The horizontal agitator works to consistently fill the screw and prevents hopper bridging while providing mass flow. This results in optimal feeder accuracy and control.

The DDSR60 is easily disassembled for wet or dry cleaning. All service is from the front or back.

The gravimetric version includes the [weighing system MS](#) featuring four high resolution digital load cells with serial data transmission as well as the [weighing system H33](#) with strain gauge load cell with advanced filtering technology.

The unit conforms to CE directives.



### Model Specification

Screw drive	Three-phase motor
Drive power	0.55 kW (0.74 HP)
Screw speed	142 min <sup>-1</sup>
Trough agitator	yes
Agitator drive	Three-phase motor
Drive power	0.12 kW (0.16 HP)

### Control Modules

Control and speed modules are offered either mounted onto the feeder ([Congrav® CM-E](#)) or are available for mounting in a separate control panel ([Congrav® CB-E](#) or [Congrav® CB-S](#)).

Controls can communicate directly to most host/ PLC systems or to Brabender Technologie Congrav® Operator Interfaces.



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### Technical Drawings and Dimensions

	Volumetric feeder	Gravimetric feeder	
		Control module CB	Control module CM
Hopper 200 dm <sup>3</sup> (7 cuft)		<a href="#">DDW-MS-DDSR60 2.0 -200</a>	<a href="#">DDW-MS-DDSR60 2.0 -200 CM</a>
		<a href="#">DDW-H33-DDSR60 2.0 -200</a>	<a href="#">DDW-H33-DDSR60 2.0 -200 CM</a>
Hopper 300 dm <sup>3</sup> (10.5 cuft)		<a href="#">DDW-MS-DDSR60 2.0 -300</a>	<a href="#">DDW-MS-DDSR60 2.0 -300 CM</a>
		<a href="#">DDW-H33-DDSR60 2.0 -300</a>	<a href="#">DDW-H33-DDSR60 2.0 -300 CM</a>
Hopper 180 dm <sup>3</sup> (6.4 cuft) AR		<a href="#">DDW-MS-DDSR60 2.0 -180 AR</a>	<a href="#">DDW-MS-DDSR60 2.0 -180 AR CM</a>
		<a href="#">DDW-H33-DDSR60 2.0 -180 AR</a>	<a href="#">DDW-H33-DDSR60 2.0 -180 AR CM</a>
Hopper 270 dm <sup>3</sup> (9.5 cuft) AR		<a href="#">DDW-MS-DDSR60 2.0 -270 AR</a>	<a href="#">DDW-MS-DDSR60 2.0 -270 AR CM</a>
		<a href="#">DDW-H33-DDSR60 2.0 -270 AR</a>	<a href="#">DDW-H33-DDSR60 2.0 -270 AR CM</a>

### Screw Sizes and Feed Rates

Screw type	Designation Ø / p [mm]	Tube designation	Tube dia. [mm]	Max. speed [min <sup>-1</sup> ]	Max. feed rate * [dm <sup>3</sup> /h]	Max. feed rate* [cuft/hr]
<a href="#">Double-spiral Screw (SS)</a>	SS 52/39	640 (689)	70.0x3.0 (76.1x3.6)	320 / 100Hz	3180 (3480)	112.3 (122.9)
	SS 52/62	640 (689)	70.0x3.0 (76.1x3.6)	320 / 100Hz	5370 (5860)	198.6 (206.9)
<a href="#">Twin-spiral Screw (TS)</a>	TS 65/45	689	76.1x3.6	320 / 100Hz	5010	176.9
	TS 65/71	689	76.1x3.6	320 / 100Hz	7900	279
<a href="#">Twin-blade Screw (TB)</a>	TB 65/45	689	76.1x3.6	320 / 100Hz	4690	165.6
	TB 65/71	689	76.1x3.6	320 / 100Hz	7520	265.6
<a href="#">Twin-concave Screw (TC)</a>	TC 60/43	640	70.0x3.0	320 / 100Hz	760	26.8
	TC 60/65	640	70.0x3.0	320 / 100Hz	2030	71.7
	TC 60/75	689	76.1x3.6	320 / 100Hz	4080	144.1

\* Theoretical values at 100% screw filling level and motor speed. Depending on the flow characteristics the screw filling level may decrease to 50%. Further limitations have to be considered for gravimetric feeding, as max. speed should be reduced to allow for bulk density variations.  
[How to read the table of screws](#)

### Technical Specification

Ambient temperature:	0°C to +45°C (32°F to 113°F)
Humidity of the air:	up to 85% without condensation
max. vacuum/pressure:	3 hPa (3 mbar) (1.2 Inches of water)
Product temperature:	0°C to +60°C (32°F to 140°F)
max. bulk density (volumetric):	1.5 kg/dm <sup>3</sup> (96 lb/cuft) *
	1.5 kg/dm <sup>3</sup> (96 lb/cuft) * with hopper 180 dm <sup>3</sup> (6.4 cuft) AR
	1.5 kg/dm <sup>3</sup> (96 lb/cuft) * with hopper 200 dm <sup>3</sup> (7 cuft)
	1.5 kg/dm <sup>3</sup> (96 lb/cuft) * with hopper 300 dm <sup>3</sup> (10.6 cuft)
max. bulk density (with MS):	
Screw trough, extension hopper, hopper lid:	1.4301 (304 SS)
Screws, screw tubes, outlets:	1.4571 (316 SS), 1.4301 (304 SS) or polyurethane, food-proof acc. to LMBG*
Non-contact components:	Aluminum, plated or painted steel (RAL 7035)
<a href="#">200 dm<sup>3</sup> (7 cuft) or 300 dm<sup>3</sup> (10.5)</a> extension hopper	Hopper lid for <a href="#">automatic refilling</a>
Screw drive:	0.75 kW (1.01 HP), IP65; ISO class F; TEFC; frequency-controlled
Agitator drive:	0.12 kW (0.16 HP), IP65; ISO class F; TEFC; frequency-controlled
Power supply:	AC 230/400V ** (110VAC/1PH/60hz, 230/460VAC/3PH/60 hz)
Net weighing range MS6:	658 kg (1450.6 lb) for 200 dm <sup>3</sup> (7 cuft) hopper; 647 kg (1426.4) for 300 dm <sup>3</sup> (10.6 cuft) hopper; 612 kg (1349.2 lb) for 180 dm <sup>3</sup> (6.4 cuft) hopper AR
Net weighing range H33:	418 kg (921.4 lb) for 200 dm <sup>3</sup> (7 cuft) hopper; 407 kg (897.3) for 300 dm <sup>3</sup> (10.6 cuft) hopper; 372 kg (820 lb) for 180 dm <sup>3</sup> (6.4 cuft) hopper AR
* other values upon request	** 3 phase motors are designed for a power supply of: 230/400 V, 50 (60) Hz, and for the operation in TT networks, TN networks or networks with earthed neutral conductor. For different networks adaptation measures are necessary.

### Options and Accessories

- Flexible [inlet and vent connections](#)
- Flexible [outlet connections](#)
- Interchangeable screws and screw tubes
- [DESTACO clamp fasteners](#) with safety switch
- Versions for higher and lower temperatures
- [Explosion-proof executions](#) as per directive 2014/34/EU (ATEX) or NFPA
- [Maintenance disconnect box](#)
- [Filter bag](#) or [JetFilter](#) for vent pipe
- [Turntable, cart mounting, BagDumper](#)
- Pressure compensation for the [outlet](#) and the [feeder hopper](#)
- Cleaning and refill systems upon request
- [Hopper with agitator \(AR\)](#)